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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Joel D. Daugherty, et al.
Serial No.:	10/659,899
Filing Date:	September 11, 2003
Group Art Unit:	2645
Confirmation No.:	4188
Examiner:	Anwah, Olisa
Title:	**SYSTEM AND METHOD FOR DETECTING UNAUTHORIZED ACCESS USING A VOICE SIGNATURE**

MAIL STOP AF

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

PRE-APPEAL BRIEF REQUEST FOR REVIEW

The following Pre-Appeal Brief Request for Review ("Request") is being filed in accordance with the provisions set forth in the Official Gazette Notice of July 12, 2005 ("OG Notice"). Pursuant to the OG Notice, this Request is being filed concurrently with a Notice of Appeal. Applicants respectfully request reconsideration of the Application in light of the remarks set forth below.

REMARKS

In the prosecution of the present Application, the Examiner's rejections and assertions contain clear errors of law, including a failure to establish *prima facie* rejections in a Final Office Action. To assist the Panel in the review of this Request, Applicants submit the following brief summary of selected portions of the prosecution history of the Application.

I.   Final Office Action

In a Final Office Action of April 22, 2005, all pending claims were rejected under 35 U.S.C. §103, but as described in further details below, the Final Office Action failed to set forth a *prima facie* rejection of several of the claims.

II.   Errors of Record

Claims 1-5, 7-13, 15, 16, 21 and 22 are rejected under 35 U.S.C. § 103(a), as being unpatentable over U.S. Patent Application Publication No. 2002/0152078 to Yuschik et al. ("*Yuschik*") in view of U.S. Pat. No. 6,141,644 to Kuhn et al. ("*Kuhn*").

Applicants respectfully submit there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine *Yuschik* and *Kuhn*. First, the Examiner has not provided the required evidence of a suggestion to combine *Yuschik* and *Kuhn*. As mandated by the Federal Circuit, "[a] factual inquiry whether to combine references must be thorough and searching." *In re Sang-Su Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002). Any "conclusory statements . . . do not adequately address the issue of motivation to combine." *Id.* The Examiner simply states at page 3 of the Final Office Action that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yuschik with the fraudulent voice signature file taught by Kuhn. This modification would have improved the efficiency of [Yuschik] by using a model-based analytical approach as suggested by Kuhn." As described in previous responses, there is simply no "factual inquiry" in this statement. Thus, this reasoning surely cannot be said to be "thorough and searching."

The Examiner states at pages 6-7 of the Final Office Action that "Yuschik discloses a simple method of identifying a speaker (see abstract). Kuhn recognizes the problems

associated with Yuschik's system (column 1) and proposes a better implementation (column 2). Thus it would have been obvious to alter Yuschik with the system of Kuhn."

First, Applicants submit that *Yuschik's* voiceprint identification system is not simple as suggested by the Examiner. *Yuschik's* system combines two automatic speech recognition technologies: Speaker Independent (SI) and Speaker Dependent (SD). (See, e.g., *Yuschik*, paragraphs 0012-0014). *Yuschik* includes "at least two signal processors [that] process the voice data, and each signal processor operates with different selection criterion." (*Id.* at para. 0020). The detailed description of *Yuschik* goes on to explain in detail this not-so-simple system. And *Kuhn* is directed toward speaker verification and speaker identification based on eigenvoices, in which:

> Speech models are constructed and trained upon the speech of known client speakers (and also impostor speakers, in the case of speaker verification). Parameters from these models are concatenated to define supervectors and a linear transformation upon these supervectors results in a dimensionality reduction yielding a low-dimensional space called eigenspace. The training speakers are then represented as points or distributions in eigenspace. Thereafter, new speech data from the test speaker is placed into eigenspace through a similar linear transformation and the proximity in eigenspace of the test speaker to the training speakers serves to authenticate or identify the test speaker. (*Kuhn*, Abstract)

Thus, these two references use different systems and methods to identify a speaker and, consequently, one skilled in the art at the time the invention was made would not combine *Yuschik* and *Kuhn*.

Second, Applicants submit that *Kuhn* does not recognize problems associated with *Yuschik's* system as suggested by the Examiner. Nowhere in the background section of *Kuhn* is the *Yuschik* system (or a similar multiple speech recognition technology system) discussed. *Kuhn* merely discusses problems with speaker verification and identification. Just because *Kuhn* deals with speaker verification and identification does not mean that its teachings can be combined with *Yuschik*. The Examiner has not provided any technical reasoning why one skilled in the art at the time the invention was made would by motivated to combine *Yuschik* and *Kuhn*. The Examiner has not provided any discussion at all on how the *Kuhn* system based on eigenvoices that utilizes a model-based analytical approach employing Hidden Markov Model parameters concatenated to form supervectors, (*see Kuhn*, cols. 1 and 2), can

be combined with the *Yuschik* system that utilizes an SI/SD combination method. Additionally, there is no reasonable expectation of success regarding the proposed *Yuschik-Kuhn* combination because of the very different approaches used by each.

Therefore, for at least this reason, a *prima facie* case of obviousness has not been established. Thus, independent Claims 1, 9 and 21 are allowable. Claim 22 is also allowable for reasons analogous to those above in conjunction with Claims 1, 9 and 21. Reconsideration and favorable action are respectfully requested.

Dependent Claims 2-5 and 7-8 depend from independent Claim 1, dependent Claims 10-13 and 15-16 depend from independent Claim 9, and are also not rendered obvious by the *Yuschik – Kuhn* combination proposed by the Examiner because they include the limitations of their respective independent claim as well as additional limitations that further distinguish *Yuschik* and *Kuhn*. Reconsideration and favorable action are respectfully requested.

Claims 17-20 are rejected under 35 U.S.C. § 103(a), as being unpatentable over *Kuhn* in view of U.S. Patent Application Publication No. 2003/0174823 to Justice et al. ("*Justice*").

Similar to the arguments above, Applicants submit that the Examiner has not provided the required evidence of a suggestion to combine *Kuhn* and *Justice*. The Examiner states at page 6 of the Final Office Action that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kuhn with the blacklist of Justice. This modification would have improved the reliability of Kuhn by providing a system and method for inhibiting fraud in card-not-present transactions as suggested by Justice (paragraph 0006)." The Examiner is simply taking an advantage of *Justice* and giving that as a reason for a motivation to combine. It appears the Examiner may be picking and choosing from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art," which is impermissible within the framework of section 103." In re Hedges, 783 F.2d 1038, 1041, 228 USPQ 685, 687 (Fed. Cir. 1986) (emphasis added). Thus, Applicants believe that the above alleged motivation is simply hindsight reconstruction. In fact, *Justice* does not even discuss automatic speech verification and/or identification. For at least this reason, Applicants submit that one skilled in the art at the time the invention was made would not be motivated to combine *Kuhn* and *Justice*.

Hence, the Examiner has not established a *prima facie* case of obviousness. Thus, independent Claims 17 and 19 are allowable. Reconsideration and favorable action are respectfully requested.

Dependent Claims 18 and 20 depend from independent Claims 17 and 19, respectively, and are also not rendered obvious by the *Kuhn* and *Justice* combination proposed by the Examiner because they include the limitations of their respective independent claim as well as additional limitations that further distinguish *Kuhn* and *Justice*. Reconsideration and favorable action are respectfully requested.

III.   Request for Relief from Errors

As a *prima facie* rejection has not been established against Claims 1-5, 7-13 and 15-22, Applicants respectfully request a finding of allowance of Claims 1-5, 7-13 and 15-22.

CONCLUSION

If the PTO deems that an interview is appropriate, Applicants would appreciate the opportunity for such an interview.

To the extent necessary, the Commissioner is hereby authorized to charge any required fees or credit any overpayments to Deposit Account No. 02-0384 of BAKER BOTTS L.L.P.

Respectfully submitted,
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Date: September 21, 2005

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